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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,634	07/30/2003	Hiroshi Iwai	2003_1059A	9147

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WENDEROTH, LIND & PONACK, L.L.P.  
2033 K STREET N. W.  
SUITE 800  
WASHINGTON, DC 20006-1021

EXAMINER

PHAM, TUAN

ART UNIT	PAPER NUMBER
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2618

MAIL DATE	DELIVERY MODE
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10/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,634	<b>Applicant(s)</b> IWAI ET AL.	
	<b>Examiner</b> TUAN A. PHAM	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21 and 23-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-37 is/are allowed.
- 6) ☒ Claim(s) 2, 23-30, and 38-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2007 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**3. Claims 21, 23-30, and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silzer, Jr. (Pub. No.: US 2004/0001022) in view of Dosch (Patent No.: US 6,587,698) and further in view of Nevermann (U.S. Patent No.: 6,921,170).**

**Regarding claim 21**, Silzer teaches a portable radio communication apparatus comprising:

a housing containing a radio communication circuit (see figure 1A, PDA 10, the housing of PDA 10 which enclosed the circuitry, [0026]),

a projection portion (read on handle) having a first end portion connected to said housing (see figure 6A, handle 50), and a second end portion connected to said housing (see figure 6A, handle 50), and a central portion located between the first and second end portions (see figure 6A, handle 50), the projection portion configured to project from the housing at an obtuse angle thereto (see figure 6D, the folding handle of the PDA will create an obtuse angle when the handle is folded up or down), wherein when said housing is supported on a flat surface (see figure 5B, 6E, the housing of PDA is supported on the flat surface), a surface of said housing opposes the flat surface and is floated from the flat surface by said projection portion (see figure 5B, 6E, the housing of PDA is mounted on the flat surface), so as to form the obtuse angle between the projection portion and the surface of the housing (see figure 6D, the folding handle of the PDA will create an obtuse angle when the handle is folded up or down), thereby separating the antenna element from the flat surface (see figure 5B, 6E, the housing of PDA is mounted on the flat surface, the distance between the antenna and the flat surface that separation the antenna to the flat surface).

It should be noticed that Silzer fails to teach an antenna element connected to the radio communication circuit through a feeding point which is arranged in said housing, wherein one part of said antenna element is mounted in at least one of an inner part of said projection portion. However, Dosch teaches an antenna element (see figure 3, antenna 16) connected to the radio communication circuit (see TX/RX module 4) through a feeding point (the feeding point is the point connected between the module 4 and antenna 16b) which is arranged in said housing, wherein one part of said antenna element is mounted in at least one of an inner part of said projection portion (see projection part 8, antenna 16b, col.2, ln.11-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Dosch into view of Silzer in order to give the user a easy to carry out as suggested by Dosch at col.1, ln.20-25.

Silzer and Dosch, in combination, fails to teach suppressing any deterioration of antenna gain due to electromagnetic coupling of the housing with the flat surface. However, Nevermann teaches such features (see figure 1, antenna 17, table surface 24, stand 23, mobile 10, it is clearly seen that when the mobile phone 1 at the position of figure 1, the antenna feeding point does not touch the surface 24, therefore it will not reduce the antenna gain).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Nevermann into view of Silzer and Dosch in order to improve the reception for the mobile device when it contact with the surface of the table.

**Regarding claim 23**, Silzer further teaches the central portion of said projection portion extends in parallel to a width direction of said portable radio communication apparatus, and the first and second end portions are bent from opposite ends of the central portion, respectively (see figure 6A, handle 50).

**Regarding claim 24**, Silzer further teaches said projection portion is shaped as an arch (see figure 6A, handle 50).

**Regarding claim 25**, Dosch further teaches a thickness of each of said first and second end portions of said projection portion is larger than a thickness of the central portion of said projection portion (see figure 3, the first and second end is larger than the central portion).

**Regarding claim 26**, Dosch further teaches a width of each of the first and second end portions of said projection portion is larger than a width of the central portion of said projection portion (see figure 3).

**Regarding claim 27**, Silzer further teaches said projection portion is detachably connected to said housing (see 0030)).

**Regarding claim 38**, Silzer further teaches said projection portion is a boom portion (see figure 6A, handle 50).

**Regarding claim 39**, Silzer further teaches said projection portion is made of a member that is formed separately from said housing (see figure 4B, the handle can be removable).

**Regarding claim 40**, Silzer further teaches said housing is supported on a flat surface by the central part of the projection portion and an end portion of said housing,

a surface of said housing opposes the flat surface and is separated from the flat surface by said projection portion, thereby separating the feeding point of said antenna element from the flat surface (it is clearly show in figure 6D, the PDA with folding handle lie on the flat surface that will support by the handle and an end of the housing and the feeding point of the antenna 52 will space apart from the flat surface).

**4. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silzer, Jr. (Pub. No.: US 2004/0001022) in view of Dosch (Patent No.: US 6,587,698) and further in view of Nevermann (U.S. Patent No.: 6,921,170) as applied to claim 21 above, and further in view of Yagi (Pub. No.: US 2003/0184494).**

**Regarding claim 28**, Silzer, Dosch, and Nevermann, in combination, fails to teaches dielectric. However, Yagi teaches such features (see [0024]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yagi into view of Silzer, Dosch, and Nevermann in order to prevent bias from adversely affecting the antenna's characteristics as suggested by Yagi at [0024].

**Regarding claim 29**, Yagi further teaches elastic resin material (see [0024]).

**Regarding claim 30**, Yagi further teaches conductor material (see [0024]).

***Allowable Subject Matter***

**5. Claims 31-37 are allowed.**

### Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Technology 2600  
Art Unit 2618  
October 22, 2007  
Examiner

  
Tuan Pham